

**New Mexico Department of Health, Scientific Laboratory Division
Method 8270D (SLD Method 756: BNAs)
Minimum Detection Limit Determination
Twelve Replicates at 1.0 ug/L for all analytes**

Analyst: Kristin M. Cochran Date: 20 December 2009

Instrument: Saturn II (Varian Saturn 2100 / Varian CP-3800 w/1177 injector / CP-8400 autosampler)

All QC data are located in the Index Folders OR-200900209, Batch 022

8270D Analytes	Control Sample MS Files and Analysis Dates (MDL Data, all on-column quantitations are ug/L)												Statistical Results			
	0218bna04	0218bna05	0218bna06	0218bna07	0218bna19	0218bna20	0218bna21	0218bna22	0220bna04	0220bna05	0220bna06	0220bna07	Ave. (ug/L)	Stand. Dev.	RSD	Detection Limit
	2/18/09 MDL-1	2/18/09 MDL-2	2/18/09 MDL-3	2/18/09 MDL-4	2/19/09 MDL-5	2/19/09 MDL-6	2/19/09 MDL-7	2/19/09 MDL-8	2/20/09 MDL-9	2/20/09 MDL-10	2/20/09 MDL-11	2/20/09 MDL-12				
pyridine	0.69	0.51	0.66	0.77	0.60	0.71	0.66	0.66	0.10	0.82	0.63	0.79	0.63	0.188	29.7%	0.512 ug/L
N-nitrosodimethylamine	0.96	0.99	0.97	0.94	0.93	1.01	1.00	0.96	1.00	1.04	0.98	1.01	0.98	0.032	3.3%	0.087 ug/L
aniline	0.87	0.79	0.85	0.80	0.91	0.95	0.82	0.91	0.82	0.91	0.89	0.84	0.86	0.051	5.9%	0.139 ug/L
phenol	0.90	0.76	0.78	0.83	0.93	0.87	0.90	0.89	0.90	0.85	0.82	0.92	0.86	0.055	6.4%	0.149 ug/L
bis(2-chloroethyl) ether	1.00	0.96	0.96	0.99	0.98	0.97	0.96	0.96	0.92	0.98	0.95	0.97	0.97	0.021	2.1%	0.056 ug/L
2-chlorophenol	1.02	0.99	0.95	1.03	1.06	0.99	0.98	1.00	0.97	0.97	0.98	0.97	0.99	0.031	3.1%	0.084 ug/L
1,3-dichlorobenzene	1.02	1.01	0.96	1.01	1.03	1.05	0.96	1.00	0.96	1.00	1.00	0.98	1.00	0.029	2.9%	0.078 ug/L
1,4-dichlorobenzene	0.98	0.98	0.98	1.04	0.94	0.91	0.86	0.95	0.92	0.95	0.92	0.96	0.95	0.045	4.8%	0.123 ug/L
1,2-dichlorobenzene	1.01	1.03	1.01	1.08	1.07	1.12	1.00	1.02	1.02	1.07	1.04	1.01	1.04	0.037	3.6%	0.100 ug/L
benzyl alcohol	0.93	0.85	0.91	0.90	0.89	0.88	0.94	0.89	0.89	0.93	0.88	0.87	0.90	0.027	3.0%	0.073 ug/L
2-methylphenol	0.98	0.90	0.94	0.98	0.97	0.95	0.97	0.95	0.93	0.93	0.93	0.92	0.95	0.025	2.7%	0.069 ug/L
bis(2-chloroisopropyl)ether	1.15	1.16	1.18	1.14	1.17	1.22	1.15	1.18	1.18	1.22	1.25	1.15	1.18	0.034	2.9%	0.093 ug/L
hexachloroethane	1.08	1.08	1.04	1.08	1.05	1.07	1.02	1.00	1.02	1.04	1.00	0.98	1.04	0.035	3.4%	0.095 ug/L
N-nitroso-di-n-propylamine	1.13	1.11	1.13	1.20	1.14	1.18	1.08	1.10	1.10	1.14	1.19	1.12	1.14	0.038	3.3%	0.103 ug/L
3-cresol & 4-cresol	0.89	0.83	0.86	0.86	0.97	0.92	0.90	0.85	0.88	0.94	0.88	0.88	0.89	0.040	4.4%	0.107 ug/L
nitrobenzene	0.91	0.87	0.89	0.89	0.91	0.86	0.90	0.91	0.89	0.84	0.86	0.90	0.89	0.023	2.6%	0.063 ug/L
isophorone	1.09	1.05	1.07	1.08	1.05	1.06	1.06	1.10	1.06	1.09	1.09	1.06	1.07	0.017	1.6%	0.048 ug/L
2-nitrophenol	0.80	0.72	0.75	0.73	0.68	0.71	0.69	0.67	0.68	0.62	0.64	0.64	0.69	0.051	7.4%	0.139 ug/L
2,4-dimethylphenol	1.00	0.94	0.94	0.94	0.93	0.95	0.90	0.88	0.91	0.83	0.92	0.89	0.92	0.042	4.6%	0.115 ug/L
bis(2-chloroethoxy)methane	0.95	0.90	0.93	0.88	0.94	0.91	0.90	0.91	0.90	0.88	0.93	0.89	0.91	0.023	2.5%	0.062 ug/L
2,4-dichlorophenol	0.86	0.85	0.87	0.80	0.95	0.89	0.91	0.79	0.89	0.73	0.78	0.84	0.85	0.062	7.4%	0.169 ug/L
1,2,4-trichlorobenzene	1.03	1.01	1.04	0.97	0.97	0.95	0.92	0.91	0.97	0.87	0.91	0.93	0.96	0.052	5.4%	0.141 ug/L
naphthalene	1.07	0.99	1.01	1.01	1.00	0.97	0.97	0.97	0.98	0.91	0.97	0.96	0.98	0.038	3.9%	0.103 ug/L
4-chloroaniline	0.72	0.65	0.70	0.71	0.70	0.70	0.68	0.67	0.69	0.67	0.66	0.71	0.69	0.022	3.2%	0.060 ug/L
hexachlorobutadiene	1.04	1.00	1.01	1.01	0.95	0.92	0.94	0.93	0.92	0.88	0.93	0.91	0.95	0.049	5.2%	0.134 ug/L
4-chloro-3-methylphenol	0.88	0.79	0.81	0.79	0.92	0.81	0.82	0.78	0.83	0.77	0.77	0.79	0.81	0.045	5.6%	0.123 ug/L
2-methylnaphthalene	0.99	0.98	0.98	0.91	0.96	0.92	0.92	0.90	0.91	0.86	0.93	0.89	0.93	0.040	4.3%	0.110 ug/L
1-methylnaphthalene	1.03	1.00	1.00	0.99	0.97	0.95	0.94	0.92	0.97	0.91	0.92	0.89	0.96	0.043	4.5%	0.117 ug/L
hexachlorocyclopentadiene	0.86	0.83	0.80	0.78	0.78	0.74	0.74	0.74	0.75	0.73	0.69	0.68	0.76	0.053	7.0%	0.144 ug/L
2,4,6-trichlorophenol	0.85	0.75	0.76	0.80	0.76	0.70	0.72	0.72	0.71	0.68	0.62	0.67	0.73	0.061	8.4%	0.166 ug/L
2,4,5-trichlorophenol	0.72	0.59	0.78	0.66	0.61	0.55	0.60	0.55	0.73	0.67	0.65	0.57	0.64	0.075	11.7%	0.203 ug/L
2-chloronaphthalene	0.97	0.96	0.93	1.01	0.95	0.92	0.94	0.96	0.98	0.89	0.95	0.92	0.95	0.032	3.3%	0.086 ug/L
2-nitroaniline	0.75	0.63	0.66	0.72	0.60	0.69	0.69	0.70	0.68	0.65	0.62	0.68	0.67	0.043	6.4%	0.117 ug/L

1,4-dinitrobenzene	0.68	0.60	0.68	0.54	0.60	0.57	0.58	0.60	0.61	0.58	0.48	0.60	0.59	0.054	9.1%	0.147 ug/L
acenaphthylene	1.00	0.99	1.01	1.04	1.00	0.93	0.98	0.97	1.01	0.94	0.97	0.93	0.98	0.034	3.5%	0.094 ug/L
1,3-dinitrobenzene	0.91	0.67	0.69	0.73	0.65	0.70	0.75	0.75	0.67	0.68	0.65	0.71	0.71	0.071	9.9%	0.193 ug/L
dimethylphthalate	0.98	0.99	0.97	1.00	0.99	0.97	0.96	1.02	1.00	0.96	0.95	0.95	0.98	0.022	2.3%	0.060 ug/L
2,6-dinitrotoluene	0.84	0.84	0.80	0.84	0.89	0.81	0.88	0.85	0.88	0.87	0.82	0.81	0.84	0.031	3.6%	0.083 ug/L
1,2-dinitrobenzene	0.93	0.88	0.86	0.98	0.90	0.89	0.92	0.87	0.95	0.91	0.86	0.89	0.90	0.037	4.1%	0.100 ug/L
3-nitroaniline	0.69	0.62	0.60	0.57	0.65	0.62	0.57	0.65	0.66	0.68	0.50	0.62	0.62	0.054	8.7%	0.146 ug/L
acenaphthene	0.93	0.92	0.91	0.96	0.99	0.97	0.93	0.98	0.96	0.91	0.94	0.96	0.95	0.027	2.9%	0.074 ug/L
2,4-dinitrophenol	0.41	0.48	0.45	0.40	0.68	0.66	0.31	0.61	0.49	0.44	0.24	0.58	0.48	0.135	28.1%	0.366 ug/L
dibenzofuran	0.97	0.93	0.93	0.94	1.00	0.93	0.95	0.94	0.94	0.92	0.92	0.94	0.94	0.023	2.4%	0.061 ug/L
4-nitrophenol	0.82	0.52	0.55	0.53	0.45	0.32	0.46	0.50	0.50	0.45	0.40	0.21	0.48	0.145	30.5%	0.395 ug/L
2,4-dinitrotoluene	0.82	0.70	0.71	0.71	0.79	0.72	0.74	0.70	0.76	0.69	0.71	0.74	0.73	0.040	5.4%	0.108 ug/L
2,3,5,6-tetrachlorophenol	0.56	0.56	0.52	0.49	0.51	0.43	0.46	0.45	0.45	0.39	0.41	0.41	0.47	0.058	12.3%	0.157 ug/L
2,3,4,6-tetrachlorophenol	0.71	0.60	0.62	0.60	0.56	0.52	0.53	0.55	0.56	0.49	0.49	0.46	0.56	0.069	12.3%	0.186 ug/L
fluorene	0.98	1.00	0.97	0.98	0.97	0.99	0.97	0.99	0.96	0.93	0.94	0.96	0.97	0.020	2.1%	0.056 ug/L
diethylphthalate	1.17	1.15	1.18	1.15	1.12	1.10	1.16	1.15	1.16	1.12	1.10	1.10	1.14	0.029	2.5%	0.078 ug/L
4-chlorophenyl phenyl ether	0.92	0.93	0.98	1.00	1.04	0.94	0.99	1.00	1.02	0.91	0.98	0.96	0.97	0.041	4.2%	0.111 ug/L
4-nitroaniline	0.94	0.76	0.76	0.65	0.72	0.72	0.70	0.76	0.70	0.69	0.63	0.70	0.73	0.078	10.8%	0.213 ug/L
4,6-dinitro-2-methylphenol	0.62	0.48	0.56	0.47	0.45	0.43	0.44	0.41	0.32	0.36	0.38	0.39	0.44	0.084	18.9%	0.228 ug/L
N-nitrosodiphenylamine	0.96	0.96	0.98	0.93	0.93	0.89	0.90	0.90	0.91	0.91	0.91	0.95	0.93	0.029	3.1%	0.079 ug/L
azobenzene	1.00	1.03	0.98	0.99	1.02	0.99	1.01	0.95	0.99	0.95	1.01	0.98	0.99	0.025	2.5%	0.067 ug/L
4-bromophenyl phenyl	1.03	1.03	1.04	0.93	1.02	0.99	1.00	0.97	0.97	0.95	0.99	0.99	0.99	0.034	3.4%	0.092 ug/L
hexachlorobenzene	1.04	1.04	1.11	1.02	0.98	0.96	0.97	0.93	0.86	0.94	0.97	0.94	0.98	0.065	6.6%	0.177 ug/L
pentachlorophenol	0.48	0.31	0.32	0.27	0.32	0.24	0.23	0.22	0.45	0.25	0.20	0.19	0.29	0.093	32.0%	0.253 ug/L
phenanthrene	0.99	1.02	1.03	0.95	1.00	0.96	1.00	0.96	0.95	0.98	0.95	0.96	0.98	0.028	2.9%	0.077 ug/L
anthracene	0.99	0.99	0.99	0.98	0.93	0.91	0.94	0.94	0.92	0.90	0.95	0.91	0.95	0.034	3.6%	0.092 ug/L
carbazole	0.95	0.96	0.94	0.90	0.91	0.96	0.94	0.89	0.89	0.92	0.92	0.93	0.93	0.025	2.7%	0.068 ug/L
di-n-butylphthalate	1.10	1.07	1.17	1.07	1.09	1.08	1.12	1.07	1.01	1.01	1.05	1.06	1.08	0.044	4.1%	0.120 ug/L
fluoranthene	1.02	0.97	1.01	0.96	0.91	0.96	0.95	0.92	0.89	0.87	0.96	0.93	0.95	0.045	4.7%	0.121 ug/L
benzidine	0.60	0.66	0.54	0.14	0.12	0.13	0.14	0.19	0.75	0.40	0.10	0.06	0.32	0.254	79%	0.689 ug/L
pyrene	0.92	0.91	0.91	0.87	0.95	0.93	0.92	0.88	0.91	0.87	0.84	0.88	0.90	0.031	3.5%	0.085 ug/L
butylbenzylphthalate	0.99	1.00	0.91	0.94	0.91	0.88	0.90	0.86	0.80	0.76	0.76	0.79	0.88	0.083	9.5%	0.225 ug/L
benzo(a)anthracene	0.71	0.64	0.54	0.64	0.45	0.62	0.58	0.65	0.55	0.54	0.48	0.53	0.58	0.076	13.2%	0.207 ug/L
chrysene	1.14	1.05	0.90	1.00	0.92	1.00	0.92	0.96	0.80	0.79	0.64	0.70	0.90	0.146	16.2%	0.397 ug/L
3,3'-dichlorobenzidine	0.72	0.48	0.49	0.47	0.39	0.49	0.50	0.41	0.46	0.46	0.44	0.38	0.47	0.087	18.2%	0.235 ug/L
bis(2-ethylhexyl)phthalate	1.04	1.02	0.97	0.94	0.93	0.93	0.91	0.87	0.78	0.75	0.71	0.72	0.88	0.115	13.0%	0.311 ug/L
di-n-octylphthalate	0.76	0.66	0.65	0.61	0.55	0.50	0.50	0.49	0.31	0.26	0.23	0.33	0.49	0.172	35.2%	0.467 ug/L
benzo(b)fluoranthene	0.75	0.62	0.61	0.61	0.51	0.55	0.60	0.43	0.53	0.48	0.37	0.54	0.55	0.099	18.1%	0.270 ug/L
benzo(k)fluoranthene	1.40	1.33	0.73	0.99	1.19	0.68	1.15	0.88	0.97	0.96	1.20	0.68	1.01	0.245	24.2%	0.666 ug/L
benzo(a)pyrene	1.17	0.95	0.90	0.94	0.83	0.84	0.74	0.91	0.73	0.89	0.70	0.73	0.86	0.132	15.3%	0.358 ug/L
indeno(1,2,3-cd)pyrene	0.28	0.38	0.49	0.35	0.56	0.53	0.55	0.36	0.21	0.16	0.12	0.35	0.36	0.150	41.6%	0.409 ug/L
dibenz(a,h)anthracene	0.68	0.64	0.60	0.49	0.40	0.35	0.39	0.48	0.24	0.35	0.19	0.22	0.42	0.163	39.0%	0.444 ug/L
benzo(g,h,i)perylene	0.78	0.79	0.49	0.63	0.63	0.72	0.66	0.65	0.62	0.55	0.44	0.53	0.62	0.108	17.4%	0.295 ug/L

Note: For twelve replicates, student t value = 2.71808, MDL = 2.71808 x Standard Deviation.